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Notice of Allowability	Application No.	Applicant(s)	
	10/083,305	GORCEA ET AL.	
	Examiner	Art Unit	
	Naheed Ejaz	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 26 February 2002 & 27 January 2006.
2. ☒ The allowed claim(s) is/are 1-5, 7-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

YESFALDET BOCHRE
PRIMARY EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Benjamin S. Withrow (Reg. No. 40,876) on February 09, 2006.

The application has been amended as follows:

In the claim:

Claim 19, page # 4, line 8, after the "modem", ---, wherein a signal from a transmit path is coupled to the receive path with the second coil to reduce losses introduced by an active impedance element in the transmit path. --- has been added.

Remarks:

The above Examiner's Amendment was made to elaborate the invention more clearly in terms of claim limitations.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: the claimed subject matter is allowable because the arts of record fail to teach or fairly suggest the following:

'A modem comprising: a first transformer comprising a first coil, a second coil and a third coil; a second transformer comprising a fourth coil and a fifth coil; said fifth

coil and said third coil comprising a receive path operatively coupled to a receive port; said fourth coil and said second coil comprising a transmit path operatively coupled to a transmit port; said transmit path further comprising an active impedance element introducing a loss onto said receive path; and said third and fifth coils introducing a gain into said receive path.'

Hence, claim 1 is allowable.

4. Claims 2-5, 7-12 and 28 are allowable as being dependent from an allowable independent claim, claim 1.

5. Claim 13 is allowable because of the following:

'A method of using a modem, comprising: receiving a signal over a transmission line; coupling the signal through a first transformer to a transmit path and a receive path; and coupling the signal from the transmit path to the receive path with a second transformer to reduce losses introduced by an active impedance element in the transmit path.'

6. Claims 14-18 are allowable as being dependent from an allowable independent claim, claim 14.

7. Claim 19 is allowable for the same reason as given above in claim 13 allowance.

8. Claims 20 and 21 are allowable as being dependent from an allowable independent claim, claim 19.

9. Claim 22 is allowable because of the following:

'A modem comprising: a first transformer having first, second, and third coils, the first coil for coupling to a network having a load impedance with a value, Z_L ; a

second transformer having a fourth and fifth coil, the fifth coil operatively coupled to the third coil and forming a receive port, a transmit power amplifier having an output coupled to the second coil through a first impedance and to the fourth coil through a second impedance; and a third impedance coupled in parallel with the fourth coil.'

10. Claims 23-27 are allowable as being dependent from an allowable independent claim, claim 22.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rezvani et al. (US 6,760,434) disclose dual impedance hybrid.
- Appel (5,544,047) teaches reflective wave compensation on high speed processor cards.
- Wisotzky (3,764,753) teaches tone keying circuit for telephone inband signaling system.
- Rhodes (5,301,208) teaches transformer bus coupler.
- Rakshani et al. (US 2004/0064275) teach system and method for detecting a device requiring power.
- Beurrier (3,789,315) discloses hybrid couplers.
- Gardner et al. (US 6,580,751) teach high speed downhole communications network having point to multi-point orthogonal frequency division multiplexing.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naheed Ejaz whose telephone number is 571-272-5947. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. E.
2/9/2006

Naheed Ejaz
Examiner
Art Unit 2631

TEST/DET. DO NOT
PRIMARY EXAMINER

